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Kyung-geun Lee

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EXAMINER

AGUSTIN, PETER VINCENT

ART UNIT

PAPER NUMBER

2627

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DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/776,345	Applicant(s) LEE, KYUNG-GEUN	
	Examiner Peter Vincent Agustin	Art Unit 2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 September 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 9-11 is/are allowed.
- 6) ☒ Claim(s) 1,3-6 and 12-33 is/are rejected.
- 7) ☒ Claim(s) 7 and 8 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 February 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1 & 3-33 are currently pending.

Drawings

2. Figures 1A, 1B & 2 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

3. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Objections

4. Claim 24 is objected to because of the following informalities:

Claim 24, line 11: "patterns" should be --pattern--.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

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6. Claim 33 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 33 recites that the compatibility information is “selectable between a state indicating compatibility with the version of the drive and another state indicating non-compatibility with a drive following a version older than the version of the drive”. The specification, as originally filed, discloses at most (see paragraph 0053) that “if an information storage medium following an n version of standards stores information about whether it is compatible with a drive following a version of standards older than the n version (e.g., an x version of standards), the drive reads out this information to select a suitable information storage medium”. The act of “selecting” refers to the drive, i.e., the drive selects a suitable storage medium. There is absolutely no disclosure of compatibility information that is “selectable between a state indicating compatibility with the version of the drive and another state indicating non-compatibility with a drive following a version older than the version of the drive”.

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 18-32 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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Claim 18, last three lines recite “the information storage medium having the version of the standard that is newer than the version of the standard of the drive”, which limitation is indefinite for the following reasons.

- (a) In regard to “the information storage medium”, it is unclear whether this information storage medium refers to the information storage medium recited in the preamble, or a limitation which has not been previously recited.
- (b) In regard to “the version of the standard of the drive”, it is unclear whether this refers to (i) “a version of a standard” recited in lines 2-3; (ii) “a version of the standard” recited in line 3; or (iii) a limitation which has not been previously recited, e.g., a version which is newer than the two versions recited in the preamble.
- (c) In regard to “newer than the version of the standard of the drive”, the terms “newer than” puts into question whether “the drive” is referring to (i) “a drive following a version of a standard that is older” recited in lines 2-3; (ii) the inherent but non-recited drive where the claimed recordable information storage medium is used; or (iii) a limitation which has not been previously recited.
- (d) In light of items (a) through (c) above, this also makes it unclear as to what “the version of the standard *that is newer*” refers.

Claim 24, last two lines recite “the information storage medium having the version of the standard that is newer than the version of the standard of the drive”, which limitation is indefinite for the same reasons noted for claim 18 above.

Claims 19-23 & 25-32 are dependent upon rejected base claims.

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9. As far as claims 18 & 24 are definite, supported by the specification, and understood by the examiner, the following art rejections are made.

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

11. Claims 1 & 4-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Kumagai et al. (US 2002/0048241).

In regard to claim 1, Kumagai et al. disclose a recordable information storage medium (Figure 1, element 101) with respect to which a recording and/or reproducing apparatus (Figure 1), including a drive (paragraph 0002: “CD-R” & “CD-RW”) following a version of a standard (e.g., the conventional “CD-ROM”) that is older than a version of the standard of the information storage medium (note also paragraph 0005, which recites “slow CD-RW” and “fast CD-RW”), records data, the information storage medium comprising: a lead-in area (shown in Figure 4); a user data area (“program area”); and a lead-out area (shown in Figure 4), wherein: compatibility information (see paragraph 0012) about whether the information storage medium is compatible with the drive is recorded in at least one of the lead-in and lead-out areas and is used by the recording and/or reproducing apparatus in the recording of the data to the information storage medium, and when the information storage medium is operable in the drive, the information

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storage medium stores information about an optimal writing pattern (note PCA in Figure 4; paragraph 0029) to be used to record the data.

In regard to claim 4, Kumagai et al. disclose that at least one of the lead-in and lead-out areas includes a reproduction-only area, and the compatibility information is recorded in the reproduction-only area (see paragraph 0012).

In regard to claim 5, Kumagai et al. disclose that the reproduction-only area is a control data zone which stores information used to control the information storage medium (see paragraph 0012).

In regard to claim 6, Kumagai et al. disclose that the compatibility information is reproduced as one of a sum signal and a differential signal (paragraph 0012: “pre-pits”, it is well known that a pre-pit signal is a sum signal).

12. Claims 24-27, 31 & 32 are rejected under 35 U.S.C. 102(e) as being anticipated by Ueki (US 7,102,970).

In regard to claim 24, Ueki discloses a recordable information storage medium (Figure 12, element 22) with respect to which a recording and/or reproducing apparatus (Figure 12), including a drive (column 8, line 19: “DVD-RW”) following an older version of a standard (e.g., the conventional “DVD-ROM”) than a version of the standard of the information storage medium, records data, the information storage medium comprising: a lead-in area (see Figure 9); a user data area (data area); and a lead-out area (inherent in any optical storage medium of the type disclosed by Ueki), wherein: information about an optimal writing pattern (Figure 3: “write strategy code”) is recorded in at least one of the lead-in (as shown) and lead-out areas, and the information about the optimal writing pattern (“write strategy code”) allows the drive to record

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and/or reproduce data with respect to the information storage medium having the version of the standard that is newer than the version of the standard of the drive (column 18, line 19 “DVD-RW”).

In regard to claim 25, Ueki discloses that at least one of the lead-in and lead-out areas includes a reproduction-only area, and the information about the optimal writing pattern is recorded in the reproduction-only area (as shown in Figure 3).

In regard to claim 26, Ueki discloses that the reproduction-only area is a control data zone included in the lead-in area to store information (as shown in Figure 3).

In regard to claim 27, Ueki discloses that the information about the optimal writing pattern is reproduced as one of a sum signal and a differential signal (column 9, lines 32-34: “lead-in area”, “pre-pits”, it is well known that a pre-pit signal is a sum signal).

In regard to claim 31, Ueki discloses that the information about the optimal writing pattern is recorded as a combination of bits (understood from the bit clock signal shown in Figure 1).

In regard to claim 32, Ueki discloses that the information about the optimal writing pattern is recorded together with information about a recording speed of the information storage medium (as shown in Figure 3).

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kumagai et al. in view of Yokoi (US 2002/0085470).

For a description of Kumagai et al., see the rejection above. However, Kumagai et al. do not disclose: in regard to claim 3, that the information storage medium further stores strategy information about which one of a multi-pulse write strategy and a single-pulse write strategy is used to record the data.

Yokoi discloses: in regard to claim 3, an information storage medium storing strategy information (paragraph 0251: “recording strategy setting”) about which one of a multi-pulse write strategy and a single-pulse write strategy is used to record data (paragraphs 0027 & 0045).

It would have been obvious to one of ordinary skill in the art at the time of invention to have applied this teaching of Yokoi to the medium of Kumagai et al., the motivation being to provide compatibility between different disk types (see paragraph 0027).

15. Claims 12-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kumagai et al. in view of Takahashi (US 5,878,020).

For a description of Kumagai et al., see the rejection above. However, Kumagai et al. do not disclose: in regard to claim 12, the lead-in area includes: a control data zone which stores information; a test zone which stores information used to test an information storage medium; a drive test zone which stores information used to test the drive; a defect management zone which stores information used to remove a defect generated on the information storage medium; and a reserved area; in regard to claim 13, that the lead-in area further includes first and second buffer zones; in regard to claim 14, that the lead-in area is divided into a reproduction-only area and a recordable area; in regard to claim 15, that the first buffer zone and the control data zone are

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included in the reproduction-only area; in regard to claim 16, that the test zone, the drive test zone, the defect management zone, the reserved zone, and the second buffer zone are included in the recordable area; and in regard to claim 17, that the information about writing patterns includes at least one of a recording speed, a reproduction power, an initial pulse time (T_{top}) of a recording pattern, a multi-pulse time (T_{mp}) of a recording pattern, a cooling pulse time of a recording pattern, a writing power (P_w), an erasing power (P_e), and a bias power (P_b).

Takahashi discloses: in regard to claim 12, a lead-in area (Figures 12 & 13) including: a control data zone (shown in Figure 13) which stores information; a test zone (“disk test zone”) which stores information used to test an information storage medium; a drive test zone (as shown) which stores information used to test the drive; a defect management zone (DMA1 & DMA2) which stores information used to remove a defect generated on the information storage medium; and a reserved area (Figure 12: “reserved”); in regard to claim 13, that the lead-in area further includes first and second buffer zones (“blank zone” and “guard track zone”); in regard to claim 14, that the lead-in area is divided into a reproduction-only area (“embossed data zone”) and a recordable area (“rewritable data zone”); in regard to claim 15, that the first buffer zone (“blank zone”) and the control data zone (as shown) are included in the reproduction-only area (as shown); and in regard to claim 16, that the test zone (“disk test zone”), the drive test zone (as shown), the defect management zone (DMA1 & DMA2), the reserved zone (“reserved”), and the second buffer zone (“guard track zone”) are included in the recordable area (as shown); and in regard to claim 17, that the information about writing patterns includes at least one of a recording speed (Figure 15: “velocity”), a reproduction power (“read power”), an initial pulse time (“pulse starting time”) of a recording pattern, a multi-pulse time (“multi-pulse duration”) of a recording

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pattern, a cooling pulse time (“pulse ending time”) of a recording pattern, a writing power (“peak power”), an erasing power, and a bias power (“bias power”).

It would have been obvious to one of ordinary skill in the art at the time of invention to have applied these teachings of Takahashi to the medium of Kumagai et al., the motivation being to provide an information recording disk which increases the speed of file management processing in reading/writing information (column 1, lines 63-65).

16. Claims 18-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ueki in view of Yokoi.

In regard to claim 18, Ueki discloses a recordable information storage medium (Figure 12, element 22) with respect to which a recording and/or reproducing apparatus (Figure 12), including a drive (column 8, line 19: “DVD-RW”) following a version of a standard (e.g., the conventional “DVD-ROM”) that is older than a version of the standard of the information storage medium, records data, the information storage medium comprising: a lead-in area (see Figure 9); a user data area (data area); and a lead-out area (inherent in any optical storage medium of the type disclosed by Ueki), wherein: information including strategy information (Figure 3: “write strategy code”), is recorded in at least one of the lead-in (as shown) and lead-out areas, and when detected by the drive, the strategy information (“write strategy code”) allows the drive to record and/or reproduce the data with respect to the information storage medium having the version of the standard that is newer than the version of the standard of the drive (column 18, line 19 “DVD-RW”).

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In regard to claim 19, Ueki discloses that at least one of the lead-in and lead-out areas includes a reproduction-only area, and the strategy information is recorded in the reproduction-only area (as shown in Figure 3).

In regard to claim 20, Ueki discloses that the reproduction-only area is a control data zone which stores information used to control the information storage medium (as shown in Figure 3).

In regard to claim 21, Ueki discloses that the strategy information is reproduced as one of a sum signal and a differential signal (column 9, lines 32-34: “lead-in area”, “pre-pits”, it is well known that a pre-pit signal is a sum signal).

However, Ueki does not disclose: in regard to claim 18, strategy information about which one of a multi-pulse write strategy and a single-pulse write strategy is used to record the data to the information storage medium.

Yokoi discloses: in regard to claim 18, strategy information (paragraph 0251: “recording strategy setting”) about which one of a multi-pulse write strategy and a single-pulse write strategy is used to record data (paragraphs 0027 & 0045).

It would have been obvious to one of ordinary skill in the art at the time of invention to have applied this teaching of Yokoi to the medium of Ueki, the motivation being to provide compatibility between different disk types (see paragraph 0027).

Allowable Subject Matter

17. Claims 9-11 are allowed over the prior art of record in light of the amendment to claims 9 & 11 in the reply filed on August 30, 2007.

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18. Claims 7 & 8 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

19. Claims 22, 23 & 28-30 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Response to Arguments

20. Applicant's arguments filed on September 12, 2008 have been fully considered but are moot in view of the new ground(s) of rejection.

Contact Information

21. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter Vincent Agustin whose telephone number is (571) 272-7567. The examiner can normally be reached on Monday-Thursday 8:30 AM-6:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Feild can be reached on (571) 272-4090. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

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/Peter Vincent Agustin/
Primary Examiner, Art Unit 2627